



November 23, 2009

Charles L.A. Terreni
Chief Clerk and Administrator
South Carolina Public Service Commission
Post Office Drawer 11649
Columbia, South Carolina 29211

Re: Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.
Power Plant Performance Report
Docket No. 2006-224-E

Dear Mr. Terreni:

Enclosed is the Power Plant Performance Report for Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. for the month of October 2009.

Sincerely,

Len S. Anthony (by dhs)

Len S. Anthony
General Counsel
Progress Energy Carolinas, Inc.

LSA/dhs
Enclosures
45612

c: John Flitter (ORS)

October 2009

The following units had no off-line outages during the month of October:

Harris Unit 1
Robinson Unit 2
Mayo Unit 1

Brunswick Unit 1

Full Forced Outage

- A. Duration: The unit was taken out of service at 22:22 on September 20, and was returned to service at 0:34 on October 2, a duration of 266 hours and 12 minutes. The unit was offline for 24 hours and 34 minutes during the month of October.
- B. Cause: The unit was removed from service as required by Technical Specification 3.8.1, Condition H due to the inoperability of Diesel Generator #4 lasting longer than seven days.
- C. Explanation: After conclusion of scheduled standard preventative maintenance on Diesel Generator #4 and during the required post-maintenance testing, a problem with the electro-mechanical governor was discovered. The problem with the governor could not be satisfactorily resolved and tested within the remaining time in the seven-day Limited Condition of Operation (LCO). As a result, the unit had to be shut down as required by Technical Specification 3.8.1.

Investigation determined that the mechanical governor control (EGB) malfunction was due to the presence of foreign material (small metallic flakes approximately 0.1 to 0.5 mm in size) in the electric pilot valve spool. The investigation concluded that the foreign material was introduced either during vendor-performed maintenance activities (most likely) or during site maintenance on the EGB.

- D. Corrective Action: After detailed testing on a spare governor, the spare was installed. Upon completion of corrective maintenance and testing activities, the unit was returned to service.

Brunswick Unit 2

Full Forced Outage

- A. Duration: The unit was taken out of service at 4:21 on September 21, and was returned to service at 9:39 on October 1, a duration of 245 hours and 18 minutes. The unit was offline for 9 hours and 39 minutes during the month of October.
- B. Cause: The unit was removed from service as required by Technical Specification 3.8.1, Condition H due to the inoperability of Diesel Generator #4 lasting longer than seven days.
- C. Explanation: After conclusion of scheduled standard preventative maintenance on Diesel Generator #4 and during the required post-maintenance testing, a problem with the electro-mechanical governor was discovered. The problem with the governor could not be satisfactorily resolved and tested within the remaining time in the seven-day Limited Condition of Operation (LCO). As a result, the unit had to be shut down as required by Technical Specification 3.8.1.

Investigation determined that the mechanical governor control (EGB) malfunction was due to the presence of foreign material (small metallic flakes approximately 0.1 to 0.5 mm in size) in the electric pilot valve spool. The investigation concluded that the foreign material was introduced either during vendor-performed maintenance activities (most likely) or during site maintenance on the EGB.

- D. Corrective Action: After detailed testing on a spare governor, the spare was installed. Upon completion of corrective maintenance and testing activities, the unit was returned to service.

Roxboro Unit 2

Full Scheduled Outage

- A. Duration: The unit was taken out of service at 22:59 on October 30, and remained offline for the remainder of the month. The unit was offline for 25 hours and 1 minute during the month of October.
- B. Cause: Boiler Inspection
- C. Explanation: The unit was taken out of service for a planned boiler inspection.
- D. Corrective Action: Planned outage activities, including boiler inspections and testing, were in progress at the end of October.

Roxboro Unit 3

Full Scheduled Outage

- A. Duration: The unit was taken out of service at 0:17 on October 3, and was returned to service at 1:41 on October 18, a duration of 361 hours and 24 minutes.
- B. Cause: Boiler Inspection
- C. Explanation: The unit was taken out of service for a planned boiler inspection.
- D. Corrective Action: Planned outage activities, including boiler inspections, periodic, preventative, and corrective maintenance were completed, and the unit was returned to service.

Full Forced Outage

- A. Duration: The unit was taken out of service at 6:50 on October 18, and was returned to service at 13:37 on October 18, a duration of 6 hours and 47 minutes.
- B. Cause: Excessive Turbine Vibration
- C. Explanation: The unit was forced off-line due to high turbine vibration.
- D. Corrective Action: Adjustments were required on the turbine to allow the unit to return to full power. Upon completion of adjustments to the turbine, the unit was returned to service.

Roxboro Unit 4

Full Scheduled Outage

- A. Duration: The unit was taken out of service at 1:09 on October 2, and was returned to service at 0:00 on October 3, a duration of 22 hours and 51 minutes.
- B. Cause: Feedwater Heater Expansion Joint Repairs
- C. Explanation: On September 29, a feedwater heater extraction expansion joint ruptured. The unit continued to operate with a derate of approximately 75 MWs. On October 2, the unit was taken off-line to repair the feedwater expansion joint.
- D. Corrective Action: Maintenance activities were conducted to repair the rupture of the feedwater heater expansion joint. Upon completion of repairs, the unit was available and capable of full-power operation, but remained in reserved shutdown status.

Full Forced Outage

- A. Duration: The unit was taken out of service at 5:00 on October 5, and was returned to service at 13:01 on October 5, a duration of 8 hours and 1 minute.
- B. Cause: Voltage Regulator Malfunction
- C. Explanation: Following the planned outage to repair the feedwater heater expansion joint, the unit experienced a delay in start-up due to the malfunction of a voltage regulator.
- D. Corrective Action: Maintenance activities were completed to correct the voltage regulator issues, and the unit was returned to service.

	Month of October 2009		Twelve Month Summary		See Notes*
MDC	938 MW		938 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	673,715 MWH		7,793,102 MWH		2
Capacity Factor	96.54 %		94.84 %		
Equivalent Availability	94.69 %		93.27 %		
Output Factor	99.84 %		100.55 %		
Heat Rate	10,422 BTU/KWH		10,439 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	123,816	1.51	3
Partial Scheduled	1,643	0.24	38,706	0.47	4
Full Forced	23,044	3.30	342,902	4.17	5
Partial Forced	12,333	1.77	48,264	0.59	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	697,872		8,216,880		8

* See 'Notes for Nuclear Units' filed with the January 2009 report.

** Gross of Power Agency

	Month of October 2009		Twelve Month Summary		See Notes*
MDC	920 MW		923 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	663,363 MWH		6,221,165 MWH		2
Capacity Factor	96.91 %		76.96 %		
Equivalent Availability	94.92 %		75.77 %		
Output Factor	98.19 %		98.01 %		
Heat Rate	10,600 BTU/KWH		10,646 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	1,336,484	16.53	3
Partial Scheduled	6,640	0.97	51,041	0.63	4
Full Forced	8,878	1.30	398,053	4.92	5
Partial Forced	19,248	2.81	176,275	2.18	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	684,480		8,084,020		8

* See 'Notes for Nuclear Units' filed with the January 2009 report.

** Gross of Power Agency

	Month of October 2009		Twelve Month Summary		See Notes*
MDC	900 MW		900 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	689,492 MWH		7,515,574 MWH		2
Capacity Factor	102.97 %		95.33 %		
Equivalent Availability	99.97 %		93.04 %		
Output Factor	102.97 %		101.72 %		
Heat Rate	10,677 BTU/KWH		10,724 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	495,270	6.28	3
Partial Scheduled	229	0.03	52,466	0.67	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	0	0.00	1,224	0.02	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	669,600		7,884,000		8

* See 'Notes for Nuclear Units' filed with the January 2009 report.

** Gross of Power Agency

	Month of October 2009		Twelve Month Summary		See Notes*
MDC	710 MW		710 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	552,952 MWH		6,069,775 MWH		2
Capacity Factor	104.68 %		97.59 %		
Equivalent Availability	98.86 %		92.70 %		
Output Factor	104.68 %		104.59 %		
Heat Rate	10,630 BTU/KWH		10,713 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	169,027	2.72	3
Partial Scheduled	6,002	1.14	34,780	0.56	4
Full Forced	0	0.00	247,080	3.97	5
Partial Forced	0	0.00	3,299	0.05	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	528,240		6,219,600		8

* See 'Notes for Nuclear Units' filed with the January 2009 report.

	Month of October 2009		Twelve Month Summary		See Notes*
MDC	742 MW		742 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	351,968 MWH		3,998,364 MWH		2
Capacity Factor	63.76 %		61.51 %		
Equivalent Availability	99.25 %		88.55 %		
Output Factor	63.76 %		71.27 %		
Heat Rate	10,957 BTU/KWH		10,685 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	662,075	10.19	3
Partial Scheduled	4,168	0.75	57,483	0.88	4
Full Forced	0	0.00	13,455	0.21	5
Partial Forced	0	0.00	11,094	0.17	6
Economic Dispatch	195,912	35.49	1,757,450	27.04	7
Possible MWH	552,048		6,499,920		8

* See 'Notes for Fossil Units' filed with the January 2009 report.

** Gross of Power Agency

	Month of October 2009		Twelve Month Summary		See Notes*
MDC	662 MW		664 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	399,951 MWH		4,438,803 MWH		2
Capacity Factor	81.20 %		76.37 %		
Equivalent Availability	96.63 %		89.33 %		
Output Factor	84.03 %		84.01 %		
Heat Rate	8,895 BTU/KWH		8,769 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	16,561	3.36	222,255	3.82	3
Partial Scheduled	56	0.01	40,058	0.69	4
Full Forced	0	0.00	278,518	4.79	5
Partial Forced	0	0.00	78,562	1.35	6
Economic Dispatch	75,960	15.42	754,108	12.97	7
Possible MWH	492,528		5,812,260		8

* See 'Notes for Fossil Units' filed with the January 2009 report.

	Month of October 2009		Twelve Month Summary		See Notes*
MDC	695 MW		697 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	147,593 MWH		3,930,652 MWH		2
Capacity Factor	28.54 %		64.41 %		
Equivalent Availability	50.51 %		91.16 %		
Output Factor	56.51 %		68.75 %		
Heat Rate	11,367 BTU/KWH		10,612 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	255,887	49.49	372,446	6.10	3
Partial Scheduled	0	0.00	94,401	1.55	4
Full Forced	0	0.00	7,437	0.12	5
Partial Forced	0	0.00	65,086	1.07	6
Economic Dispatch	113,600	21.97	1,632,829	26.76	7
Possible MWH	517,080		6,102,800		8

* See 'Notes for Fossil Units' filed with the January 2009 report.

	Month of October 2009		Twelve Month Summary		See Notes*
MDC	698 MW		698 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	324,288 MWH		4,374,823 MWH		2
Capacity Factor	62.45 %		71.55 %		
Equivalent Availability	95.47 %		93.74 %		
Output Factor	70.38 %		75.59 %		
Heat Rate	12,154 BTU/KWH		11,377 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	15,949	3.07	284,249	4.65	3
Partial Scheduled	0	0.00	25,337	0.41	4
Full Forced	5,596	1.08	5,596	0.09	5
Partial Forced	1,961	0.38	67,550	1.10	6
Economic Dispatch	171,517	33.03	1,356,925	22.19	7
Possible MWH	519,312		6,114,480		8

* See 'Notes for Fossil Units' filed with the January 2009 report.

** Gross of Power Agency

Plant	Unit	Current MW Rating	January 2008 - December 2008	October 2009	January 2009 - October 2009
Asheville	1	191	67.84	53.56	70.60
Asheville	2	185	64.83	41.59	58.75
Cape Fear	5	144	69.98	53.62	66.14
Cape Fear	6	172	61.62	49.76	61.99
Lee	1	74	62.88	28.80	47.89
Lee	2	77	50.49	15.13	40.24
Lee	3	246	38.21	23.47	58.18
Mayo	1	742	62.59	63.76	59.90
Robinson	1	174	65.88	58.83	58.85
Roxboro	1	369	69.79	79.48	80.89
Roxboro	2	662	78.24	81.20	74.92
Roxboro	3	695	66.00	28.54	62.85
Roxboro	4	698	70.32	62.45	70.86
Sutton	1	93	46.46	27.91	37.15
Sutton	2	104	55.49	41.91	43.58
Sutton	3	403	56.73	41.52	52.55
Weatherspoon	1	48	42.83	2.79	12.60
Weatherspoon	2	49	41.04	2.21	14.22
Weatherspoon	3	75	56.58	2.77	22.54
Fossil System Total		5,201	64.48	52.19	62.47
Brunswick	1	938	85.33	96.54	96.86
Brunswick	2	920	95.43	96.91	74.87
Harris	1	900	98.94	102.97	93.75
Robinson Nuclear	2	710	87.02	104.68	104.34
Nuclear System Total		3,468	91.90	99.97	91.75
Total System		8,669	75.45	71.31	74.18

Amended SC Fuel Rule
Related to Nuclear Operations

There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation system if the utility achieved a net capacity factor of $\geq 92.5\%$ during the 12 month period under review. For the test period April 1, 2009 through October 31, 2009, actual period to date performance is summarized below:

Period to Date: April 1, 2009 to October 31, 2009

Nuclear System Capacity Factor Calculation (Based on net generation)

A.. Nuclear system actual generation for SCPSC test period	A = 16,201,844 MWH
B. Total number of hours during SCPSC test period	B = 5,136 hours
C. Nuclear system MDC during SCPSC test period (see page 2)	C = 3,468 MW
D. Reasonable nuclear system reductions (see page 2)	D = 1,926,995 MWH

A. SC Fuel Case nuclear system capacity factor: $[(A + D) / (B + C)] * 100 = 101.8\%$

NOTE:

If Line Item E $> 92.5\%$, presumption of utility's minimum cost of operation.

If Line Item E $< 92.5\%$, utility has burden of proof of reasonable operations.

Amended SC Fuel Rule
Nuclear System Capacity Factor Calculation
Reasonable Nuclear System Reductions
Period to Date: April 1, 2009 to October 31, 2009

Nuclear Unit Name and Designation	BNP Unit # 1	BNP Unit # 2	HNP Unit # 1	RNP Unit # 2	Nuclear System
Unit MDC	938 MW	920 MW	900 MW	710 MW	3,468 MW
Reasonable refueling outage time (MWH)	0	632,331	495,270	0	
Reasonable maintenance, repair, and equipment replacement outage time (MWH)	275,203	364,113	1,122	42,214	
Reasonable coast down power reductions (MWH)	0	0	24,856	0	
Reasonable power ascension power reductions (MWH)	13,400	40,302	20,300	0	
Prudent NRC required testing outages (MWH)	6,037	11,619	228	0	
SCPSC identified outages not directly under utility control (MWH)	0	0	0	0	
Acts of Nature reductions (MWH)	0	0	0	0	
Reasonable nuclear reduction due to low system load (MWH)	0	0	0	0	
Unit total excluded MWH	294,640	1,048,365	541,776	42,214	
Total reasonable outage time exclusions [carry to Page 1, Line D]					1,926,995